APPLICATION OF REMOTE SENSING FOR FISHERY RESOURCE ASSESSMENT AND MONITORING

SKYLAB EXPERIMENT NO. 240

CONTRACT NO. T-8217B

(E76-10014) APPLICATION OF REMOTE SENSING FOR FISHERY RESOURCE ASSESSMENT AND MONITORING Progress Report, 1-31 Aug. 1975 (Mississippi Test Facility) 3 p HC $3.25 CSCL 08A G3/43

N76-10546

Unclas 00014

PROGRESS REPORT NO. 20

REPORTING PERIOD: 1 August to 31 August 1975

Approved: _____

Date Submitted: 9/25/75

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INTRODUCTION

This is report #20 of a series of progress reports required by the Statement of Work for Skylab Experiment #240 entitled "Application of Remote Sensing for Oceanic Gamefish Assessment and Monitoring" under Contract No. T-8217B.

OVERALL STATUS

Modification of ERL's software to make the Skylab data look like LANDSAT data in order to use LANDSAT processing programs has been completed. The processing of several channels of data to display these channels as well as investigate the effects of subtracting off the radiance values of an IR channel from these channels in an effort to reduce sun glint is presently in progress. The processing of the S192 radiance values at the fishing subsquare level (25 square mile area) is also in progress. Subsquares with a large percentage of cloud cover will be deleted. Cloud removal on subsquares with limited cloud cover will be attempted by setting a tolerance level on the radiance values. Delays in S192 processing in the Earth Resources Laboratory caused by late arrival of data, multiple projects being worked at the same time, and software modifications/ hardware failure will presently delay the completion of the final report to October 30, 1975, assuming that all S192 data processing will be completed and received from the ERL by September 30, 1975.

A set of white marlin catch data from August 4, 1973 along with surface water temperature, water density, Secchi disc transparency, and the interaction of

Secchi disc transparency and chlorophyll-a has been processed through a discriminate function analysis program and the results are being compared to the results acquired from the multiple regression analysis program.

EXPECTED ACCOMPLISHMENTS

Completion of sample display tapes processed to reduce sun glitter will be accomplished in the next month. An evaluation of the data will be made to determine if the glitter corrected tape shows features in the water which might be interpreted to correlate to the biological data or to oceanographic data. If the results are positive, data will be extracted and formatted for statistical analysis. If no significant variation is seen, no further extraction or analysis of the S192 will be performed. The S192 evaluation and analysis to date will be documented, and added to the final report draft.